

REMARKS

Once again, the allowance of claims 24-31 and 45 is gratefully acknowledged. The claim rejections are addressed below.

The § 102 and 103 Rejections

Claims 1-23 and 32-41 presently stand rejected as allegedly anticipated by and/or obvious over U.S. Patent No. 5,635,696 (Dabrowski), by itself or in various combinations with four other cited patents. More specifically, claims 1-5, 9, 12-17, 19 and 20 presently stand rejected under 102(b) as allegedly anticipated by Dabrowski '696. Claims 6-7, 18, 32-33, and 35-40 presently stand rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of U.S. Patent No. 5,919,091 (Bell, et al.). Claims 10, 11, 21 and 22 presently stand rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of U.S. Patent 5,495,098 (Pailles et al.). Claim 23 presently stands rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of U.S. Patent No. 5,450,938 (Rademacher). Claim 34 presently stands rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of Bell '091 and Rademacher '938. Claim 41 presently stands rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of Bell '091 and Pailles '098. Claims 43 and 44 presently stand rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of U.S. Patent 4,808,803 (Magier). Claim 46 presently stands rejected under 103(a) as allegedly unpatentable over Dabrowski '696 in view of Bell '091 and Magier '803. These rejections are respectfully traversed.

Claims 1-3, 13-16, 19, 32, and 36 have been amended to clarify the subject matter being claimed. In the remarks below, independent claims 1, 2, 13, and 32 will first be addressed, followed later by the dependent claims.

Claim 1 is directed to a combined bill acceptor and data unit reader, and includes a “bill acceptor,” a “host interface,” and a “data unit reader electronically interposed between said bill acceptor and said host interface.” The bill acceptor “receiv[es] and validat[es] currency, control[s] a mechanical cash input mechanism, and generat[es] digital cash transaction data according to a bill validator protocol.” The data unit reader comprises a “digital electronic bill acceptor interface for receiving digital cash transaction data from said bill acceptor according to the bill validator protocol,” and is configured to “pass[] through cash transaction data from said bill acceptor to said host interface according to the bill validator protocol when currency is accepted by said bill acceptor, and transmit[] cashless transaction data to said host interface according to a different protocol when a data unit is read by said data unit reader.”

Claim 1 has been amended to clarify that the bill acceptor “receiv[es] and validat[es] currency, control[s] a mechanical cash input mechanism, and generat[es] digital cash transaction data according to a bill validator protocol,” and that the data unit reader comprises a “digital electronic bill acceptor interface for receiving digital cash transaction data from said bill acceptor according to the bill validator protocol.” These amendments more clearly specify the unique architecture of the invention set forth in claim 1, which provides a data unit reader that is “electronically interposed between said bill acceptor and said host interface.” In Applicant’s prior Amendment,

it was generally pointed out that, in contrast to claim 1 as previously amended, the magnetic card reader of Dabrowski '696 connects in parallel with the bill acceptor to the I/O printed circuit board 56, and is not "*electronically interposed*" between the magnetic card reader and a host interface. Applicant argued that Dabrowski '696 therefore failed to disclose or suggest a "data unit reader" (such as a magnetic card reader) that is "*electronically interposed*" between a bill acceptor and a host interface, as recited in claim 1. In response to those arguments, the Examiner asserts at page 9 of the instant Office Action that "the data unit/smart card reader passing through cash transaction data is broadly interpreted for examination purposes," and that with respect to Dabrowski '696, "the blockage of the card opening 40 allows for the 'passing through of cash transaction data' by way of a currency slot 104, thereby reading upon the claimed limitation."

It is respectfully submitted that the amendments to claim 1 further clarify the claimed subject matter in a manner distinguishing Dabrowski '696 and overcoming the current rejection. Claim 1, as amended, now specifies that the bill acceptor "generat[es] digital cash transaction data according to a bill validator protocol," and that the data unit reader comprises a "digital electronic bill acceptor interface for receiving digital cash transaction data from said bill acceptor according to the bill validator protocol." These recitals more clearly indicate what it means for the data unit reader to be "*electronically interposed*" between a bill acceptor and a host interface. According to the claimed architecture, "digital cash transaction data" is received by a "digital electronic bill acceptor interface" of the data unit reader, which then either "pass[es] through cash transaction data from said bill acceptor to said

host interface according to the bill validator protocol when currency is accepted by said bill acceptor," or else "transmit[s] cashless transaction data to said host interface according to a different protocol when a data unit is read by said data unit reader."

In contrast, Dabrowski's magnetic card reader does not include a "digital electronic bill acceptor interface for receiving digital cash transaction data" from a bill acceptor, and hence its magnetic card reader does not and cannot act as a pass-through mechanism for cash or cashless data depending upon the transaction. Applicant's invention as set forth in claim 1 allows, for example, a single host interface to be utilized, increasing convenience and minimizing connections. Applicant's invention also allows existing host machines to be retro-fitted with cashless capability by "electronically interposing" a data unit reader, without disrupting the use of the bill validator protocol as may be employed by the host machine. This is a substantial advantage over Dabrowski's hardwired approach.

Accordingly, it is respectfully submitted that claim 1 is neither anticipated by nor obvious in view of Dabrowski '696, and that it should therefore be allowable.¹

¹ It is respectfully submitted that the other cited items also fail to disclose or suggest the claimed features. In Bell '091, for example, the bill acceptor 62 is illustrated in Fig. 6 as connected directly to a machine CPU 56. There is no indication of a data unit reader "electrically interposed" between a bill acceptor and a host interface. In Rademacher '938, the card vend controller 28 mimics the vending machine coin changer, and sends "the same signals that would be sent from the coin and currency acceptor" to the vending machine. See col. 3, lines 25-31. Rademacher '938 fails to disclose or suggest, among other things, a data unit reader which "pass[es] through cash transaction data from said bill acceptor to said host interface according to a bill validator protocol when currency is accepted by said bill acceptor," and "transmit[s] cashless transaction data to said host interface according to a different protocol when a data unit is read by said data unit reader."

Independent claim 2, similar to claim 1, is directed to a combined bill acceptor and data unit reader comprising a “bill acceptor,” a “host interface,” and a “data unit reader electronically interposed between said bill acceptor and said host interface.” Also similar to claim 1, the bill acceptor “receiv[es] and validat[es] currency, control[s] a mechanical cash input mechanism, and generat[es] digital cash transaction data according to a bill validator protocol,” and the data unit reader “pass[es] through cash transaction data from said bill acceptor to said host interface according to the bill validator protocol when currency is accepted by said bill acceptor, and transmit[s] cashless transaction data to said host interface according to a different protocol when a data unit is read by said data unit reader.” In addition, the data unit reader of claim 2 comprises a “relay across which electrical signals comprising cash transaction data are transmitted from the bill acceptor to said host interface according to the bill validator protocol.” The data unit reader “passes through cash transaction data from said bill acceptor to said host interface when said relay is in a first position, and prevents cash transaction data from passing through from said bill acceptor to said host interface when said relay is in a second position.”

In Applicant’s prior Amendment, Applicant pointed out that while the Office Action cited to the currency gate 100 of Dabrowski ‘696 as allegedly corresponding to the claimed “relay,” the physical currency “gate” of Dabrowski ‘696 was not one “across which electrical signals are transmitted,” as required by the relay of claim 2. Moreover, Applicant further argued that the currency gate 100 of Dabrowski ‘696 did not “pass[] through cash transaction **data**” from a bill acceptor, but rather physically

allowed or blocked actual currency to be inserted into a bill acceptor. In response to these arguments, the Examiner now asserts that the “electrical signals” of claim 2 correspond to “signals which control currency gate 100” (Office Action at p. 3) and that “the blockage of the card opening 40 allows for the ‘passing through of cash transaction data’ by way of a currency slot” thus reading on the claimed limitations.

It is respectfully submitted that the amendments to claim 2 further clarify the claimed subject matter in a manner distinguishing Dabrowski '696 and overcoming the current rejection. Claim 2, as amended, now specifies that the bill acceptor “generat[es] digital cash transaction data according to a bill validator protocol,” and that the data unit reader comprises a “relay **across which electrical signals comprising cash transaction data are transmitted** from the bill acceptor to said host interface according to the bill validator protocol.” The “relay” of claim 2 is therefore more clearly specified as an electronic conduit of data, passing through electronic data from the bill acceptor to the host interface, and its operation is clearly fundamentally different from the physical currency gate 100 utilized by Dabrowski '696. Moreover, the amendments further highlight the nature of the data unit reader of claim 2 as an intermediary between the bill acceptor and the host machine. It is therefore respectfully submitted that claim 2 is neither anticipated by nor obvious in view of Dabrowski '696, and should be allowable over it as well as the other cited items.

Independent claim 13 is directed to a “multi-mode card reader,” and includes a “card reader interface,” a “bill acceptor interface,” and “a card reader controller connected to said card reader interface and electronically interposed between said

bill acceptor interface and a host interface.” The bill acceptor interface communicates with a bill acceptor that is “configured to receive and validate currency, control a mechanical cash input mechanism, and generate digital cash transaction data according to a bill validator protocol.” The card reader controller is configured to “allow[] transfer of cash transaction data from said bill acceptor interface to said host interface when said cash transaction data is received from said bill acceptor interface and said card reader controller is in a first mode” associated with “cash transaction processing,” and to “allow[] transfer of cashless transaction data from said card reader interface to said host interface when said cashless transaction data is received from said card reader interface and said card reader controller is in a second mode” associated with “cashless transaction processing.” The card reader controller also “is programmed to block cashless transaction data from being electronically conveyed via said card reader interface when in said first mode.”

It is respectfully submitted that, in contrast to the above subject matter, Dabrowski '696 fails to disclose or suggest a card reader controller “electronically interposed between” a bill acceptor interface and a host interface, for reasons generally similar to those explained for claim 1. Moreover, claim 13 has been amended to clarify that the card reader controller operates according to a “first mode … associated with cash transaction processing,” whereby transfer of cash transaction data from the bill acceptor interface to the host interface is allowed when cash transaction data is received from the bill acceptor interface, and a “second mode … associated with cashless transaction processing,” whereby transfer of

cashless transaction data from the card reader interface to the host interface is allowed when said cashless transaction data is received from the card reader interface. It is respectfully submitted that Dabrowski's device does not operate according to such modes.

In addition, claim 13 has also been amended to clarify that the card reader controller "is programmed to block cashless transaction data from being electronically conveyed via said card reader interface when in said first mode." In contrast, Dabrowski '696 does not describe such a configuration or operation, but rather merely physically blocks the card opening with currency gate 100 when reading currency. It is therefore respectfully submitted that claim 13 should be allowable over Dabrowski '696 and the other cited items.

Independent claim 32 is directed to a "combined bill acceptor and smart card reader," including a "bill acceptor," a "host interface," and a "smart card reader electronically interposed between said bill acceptor and said host interface." The bill acceptor is "configured to receive and validate currency, to control a mechanical cash input mechanism, and to generate cash transaction data according to a bill validator protocol." The smart card reader comprises "a digital bill acceptor interface for receiving digital cash transaction data from said bill acceptor according to the bill validator protocol," and is configured to "pass[] through cash transaction data from said bill acceptor to a separate host device microprocessor via said host interface when currency is accepted by said bill acceptor and said smart card reader is in a cash mode, and transmit[] cashless transaction data to said host device microprocessor via said host interface according to a cashless protocol when

a smart card is read by said smart card reader and said smart card reader is in a cashless mode."

It is respectfully submitted that the amendments to claim 32 further clarify the claimed subject matter in a manner distinguishing Dabrowski '696 and Bell '091 overcoming the current rejection. Claim 32, as amended, now specifies that bill acceptor is "configured to receive and validate currency, to control a mechanical cash input mechanism, and to generate cash transaction data according to a bill validator protocol," and that the smart card reader comprises "a digital bill acceptor interface for receiving digital cash transaction data" from the bill acceptor according to the bill validator protocol. Similar to claim 1, the above recitals more clearly indicate what it means for the smart card reader to be "electronically interposed" between a bill acceptor and a host interface. According to the claimed architecture, "digital cash transaction data" is received by a "digital electronic bill acceptor interface" of the smart card reader, which then either "pass[es] through cash transaction data from said bill acceptor to a separate host device microprocessor via said host interface when currency is accepted by said bill acceptor and said smart card reader is in a cash mode," or "transmit[s] cashless transaction data to said host device microprocessor via said host interface according to a cashless protocol when a smart card is read by said smart card reader and said smart card reader is in a cashless mode."

In contrast, Dabrowski's magnetic card reader does not include a "digital electronic bill acceptor interface for receiving digital cash transaction data" from a bill acceptor, and hence its magnetic card reader does not and cannot act as a

pass-through mechanism for cash or cashless data depending upon the transaction. Similar to claim 1, Applicant's invention as set forth in claim 32 allows, for example, a single host interface to be utilized, increasing convenience and minimizing connections. Applicant's invention also allows existing host machines to be retrofitted with cashless capability by "electronically interposing" a smart card reader, without disrupting the use of the bill validator protocol as may be employed by the host machine. This is a substantial advantage over Dabrowski's approach.

Moreover, claim 32 has been amended to clarify that the host device microprocessor is "separate" and distinct from the smart card reader. By contrast, Dabrowski '696 does not disclose or suggest a smart card reader that has a "digital electronic bill acceptor interface" which, among other things, "pass[es] through cash transaction data from said bill acceptor to a separate host device microprocessor" via a host interface under certain conditions, as set forth in claim 32. None of the foregoing features are found in the Bell '091 reference either.

Accordingly, it is respectfully submitted that claim 32 is neither anticipated by nor obvious in view of Dabrowski '696 or Bell '091, and that it should therefore be allowable.

Claims 3-7, 9-12, 14-23, 33-44, and 46 all depend from claims 1, 2, 13, or 32, respectively, and therefore should be allowable for at least the same reasons as the underlying independent claims. Moreover, the dependent claims include additional novel and patentable features over the cited items. These have been described in greater detail in Applicant's prior submission of May 16, 2005, and, in the interest of

expediency, the arguments pertaining thereto are not repeated here but rather incorporated by reference as if set forth fully herein.

However, some additional amendments to the dependent claims have been made. For example, claim 3 has been amended to depend from claim 1 instead of claim 2.

Claim 14 has been amended, similar to claim 2, to specify that the claimed reader comprises a relay “across which electrical signals **comprising cash transaction data** are transmitted **from the bill acceptor to said host interface according to the bill validator protocol.**” Thus, remarks made with respect to claim 2 apply to claim 14 as well.

Claims 15 and 19 has been amended to make the antecedent basis consistent with the changes to claim 13.

Claim 16 has been amended to specify that the relay switches from said first position to said second position when said card reader interface detects insertion of a portable electronic card, “thereby temporarily preventing cash transaction data from passing from said bill acceptor interface to said host interface.” As noted previously, Dabrowski’s currency gate merely prevents the physical insertion of currency or a card, and does not prevent “cash transaction data from passing from” one interface to another interface.

Claim 36 has been amended to specify that the smart card reader comprises a “relay across which electrical signals **comprising cash transaction data** are transmitted **from the bill acceptor to said host interface according to the bill validator protocol,**” and that the smart card reader “passes through cash

transaction data in the bill validator protocol from said bill acceptor to said host interface when said relay is in a first position ***associated with said cash mode***, and prevents cash transaction data from passing through from said bill acceptor to said host interface when said relay is in a second position ***associated with said cashless mode.***" Remarks made with respect to claim 2 apply here as well, and it is respectfully submitted that claim 36 should be allowable for similar reasons.

Reservation of Right to Challenge Cited Items

While Applicants have addressed the cited items on the merits, this should not be construed as an admission that some or all of the cited items constitute prior art as against the claimed invention. Applicants reserve the right to antedate any of the cited items pursuant to the appropriate rules, laws, and regulations if deemed necessary to do so.

Likewise, Applicant's election to address the cited items on the merits should not be construed as an admission the items provide an enabling disclosure. Applicants reserve the right to challenge the sufficiency of the cited items at a later point in time, including in any post-issuance proceeding or suit, if appropriate.

Request for Allowance

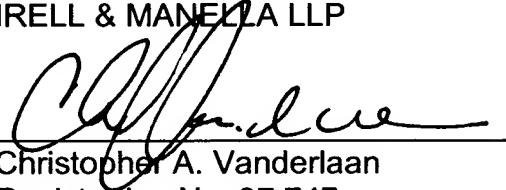
The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any unresolved issue remains, the Examiner is invited to contact

the undersigned by telephone to discuss those issues so that the Notice of Allowance can be mailed at the earliest possible date.

It is respectfully submitted that the instant application stands in condition for allowance, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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